

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

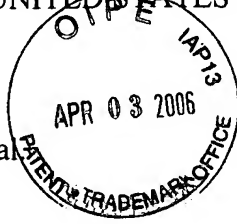
IFW

In re application of

Akira KABESHITA et al

Serial No.10/564,275

Filed January 11, 2006



Mail Stop: PCT

Attorney Docket No. 2005_1927A

COMPONENT MOUNTING APPARATUS
AND COMPONENT MOUNTING METHOD
[Corresponding to PCT/JP2004/012600
Filed August 25, 2004]

**SUBMISSION OF ENGLISH VERSIONS OF INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY AND WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith for consideration by the Examiner are:

- 1) An English version of the International Preliminary Report on Patentability; and
- 2) An English version of the Written Opinion of the International Searching Authority.

Please note that claims 12 and 13 were not considered by the International Searching Authority. The failure to examine claims 12 and 13 was a mistake by the ISA. Accordingly, claims 12 and 13 also have not been considered in the attached International Preliminary Report on Patentability.

Respectfully submitted,

Akira KABESHITA et al.

By

A handwritten signature in dark ink, appearing to read "Michael S. Huppert".

Michael S. Huppert
Registration No. 40,268
Attorney for Applicants

MSH/kjf
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
April 3, 2006

**PCT**

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)

(PCT Rule 44bis.1(c))

From the INTERNATIONAL BUREAU

To:

KAWAMIYA, Osamu
Aoyama & Partners, IMP Building
1-chome, Chuo-ku
Osaka-shi, Osaka 5400001
JAPON

3-7, Shiromi

Date of mailing (*day/month/year*)

09 March 2006 (09.03.2006)

Applicant's or agent's file reference

664443

IMPORTANT NOTICE

International application No.

PCT/JP2004/012600

International filing date (*day/month/year*)

25 August 2004 (25.08.2004)

Priority date (*day/month/year*)

27 August 2003 (27.08.2003)

Applicant

MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD. et al

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.+41 22 740 14 35

Authorized officer

Yoshiko Kuwahara

Facsimile No.+41 22 338 90 90

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

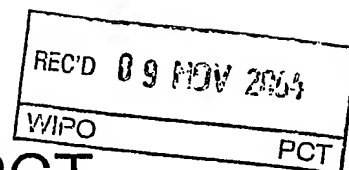
Applicant's or agent's file reference 664443	FOR FURTHER ACTION	See item 4 below
International application No. PCT/JP2004/012600	International filing date (<i>day/month/year</i>) 25 August 2004 (25.08.2004)	Priority date (<i>day/month/year</i>) 27 August 2003 (27.08.2003)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																								
2.	This REPORT consists of a total of 7 sheets, including this cover sheet.																								
In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																									
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Box No. I</td> <td style="width: 60%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input checked="" type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input checked="" type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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<input type="checkbox"/>	Box No. VIII	Certain observations on the international application																							
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Date of issuance of this report 27 February 2006 (27.02.2006)</td> </tr> <tr> <td style="padding: 2px;">Authorized officer Yoshiko Kuwahara</td> </tr> <tr> <td style="padding: 2px;">Telephone No. +41 22 338 90 90</td> </tr> </table>	Date of issuance of this report 27 February 2006 (27.02.2006)	Authorized officer Yoshiko Kuwahara	Telephone No. +41 22 338 90 90
Date of issuance of this report 27 February 2006 (27.02.2006)				
Authorized officer Yoshiko Kuwahara				
Telephone No. +41 22 338 90 90				
Facsimile No. +41 22 740 14 35				

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY



PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2004/012600

International filing date (day/month/year)
25.08.2004

Priority date (day/month/year)
27.08.2003

International Patent Classification (IPC) or both national classification and IPC
H01L21/00

Applicant
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office - P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040 Tx: 31 651 epo nl
Fax: +31 70 340 - 3016

Authorized Officer

Oberle, T

Telephone No. +31 70 340-4014



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2004/012600

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2004/012600

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-11
	No: Claims	
Inventive step (IS)	Yes: Claims	1-11
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-11
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item V.

1 The following documents are referred to in this communication:

D1 : PATENT ABSTRACTS OF JAPAN vol. 1995, no. 08, 29 September 1995
(1995-09-29) -& JP 07 135228 A (TOYOTA MOTOR CORP), 23 May 1995
(1995-05-23)

2 INDEPENDENT CLAIM 1:

2.1 Document D1, which is considered to represent the most relevant state of the art, discloses (the references in parenthesis applying to this document, see fig.1 and 2):

A component mounting apparatus for mounting a plurality of components of semiconductor chips (33) fed from a diced wafer (25) on a board (7), comprising: a board holding device (2,3,5) for holding the board (7) fed to the component mounting apparatus releasably at a board holding position (P); a first mounting head (10) for holding and taking out the component (33) fed from a first component feeding position (see position of upper wafer 25 in fig.1) and mounting the component (33) on the board (7) held at the board holding position (P); a second mounting head (11) for holding and taking out the component (33) fed from a second component feeding position (see position of lower wafer in fig.1) and mounting the component (33) on the board (7) held at the board holding position (P);

From this, the subject-matter of independent claim 1 differs in that: a component feeding device which is provided with a wafer holding table for holding the wafer and a table moving device for moving the wafer holding table reciprocally between the first component feeding position and the second component feeding position, so as to feed the component from the wafer to each moving head at each component feeding position.

The subject-matter of claim 1 is therefore **novel** (Article 33(2) PCT)

The problem to be solved by the present invention may be regarded as improving the productivity in the component mounting.

- 2.2 The solution to this problem proposed in claim 1 of the present application is considered as involving an **inventive step** (Article 33(3) PCT) for the following reasons:

None of the prior art documents cited in the search report discloses an indication, a hint or a teaching that would lead the skilled man towards the solution proposed in claim 1.

- 2.3 Claims 2-9 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

3 INDEPENDENT CLAIM 10:

- 3.1 Document D1 discloses (the references in parenthesis applying to this document, see fig.1 and 2):

A method for mounting a plurality of components (33) on an board (7) using two mounting heads (10,11) and two component feeding positions (see positions of upper and lower wafers in fig.1) comprising the steps of:

holding and taking out the component by the first mounting head at the first component feeding position, moving the first mounting head to the board holding position with the held component, mounting the first mounting head to the first component feeding position

from which the subject-matter of claim 10 differs in that :

until arriving of the first mounting head at the first feeding position, the wafer holding table is moved from the first component feeding position to the second component feeding position, the component is held and taken out by the second mounting head at the second component feeding position, and the wafer holding table is returned to the first component feeding position.

The subject-matter of claim 10 is therefore **novel** (Article 33(2) PCT)

The problem to be solved by the present invention may be regarded as improving

the productivity in the component mounting and none of the prior art documents cited in the search report discloses an indication, a hint or a teaching that would lead the skilled man towards the solution proposed in claim 10.

Therefore, the solution to this problem proposed in claim 10 of the present application is considered as involving an **inventive step** (Article 33(3) PCT)

- 3.2 Claim 11 is dependent on claim 10 and as such also meets the requirements of the PCT with respect to novelty and inventive step.

Re Item VII.

- 1 Independent claims 1,10 are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document D1) being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).
- 2 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.